35. (Once amended) A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least a first gene or portion thereof and at least a first recombination site;

(b) providing a second nucleic acid molecule comprising at least a second gene or portion thereof and at least a second recombination site; and

(c) forming a mixture *in vitro* between said first and second nucleic acid molecules and at least one recombination protein, under conditions sufficient to cause recombination *in vitro* between said first and second recombination sites, thereby producing a third nucleic acid molecule in which said first and second genes or portions thereof are operably linked to form a functional gene.

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Please substitute the following claim 36 for currently pending claim 36:

36. (Once amended) The method of claim 35, wherein said first gene or said second gene encodes a selectable marker.

Please substitute the following claim 37 for currently pending claim 37:

37. (Once amended) The method of claim 35, wherein said first gene or said second gene is an antibiotic resistance gene.

Please substitute the following claim 40 for currently pending claim 40:

40. (Once amended) The method of claim 35, wherein said first gene or portion thereof or said second gene or portion thereof comprises a promoter.

Please substitute the following claim 41 for currently pending claim 41:

41. (Once amended) The method of claim 35, wherein said first or second genes or portions thereof are structural genes or portion thereof.

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Please substitute the following claim 42 for currently pending claim 42:

42. (Once amended) The method of claim 35, wherein said first gene or said second gene encodes a heterodimeric gene product.

Please substitute the following claim 57 for currently pending claim 57:

57. (Once amended) The method of claim 35, wherein said first gene or portion thereof is located adjacent to said first recombination site.

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Please substitute the following claim 58 for currently pending claim 58:

58. (Once amended) The method of claim 35, wherein said second gene or portion thereof is located adjacent to said second recombination site.

Please substitute the following claim 69 for currently pending claim 69:

69. (Once amended) The method of claim 35, wherein said first gene or portion

D5 thereof or said second gene or portion thereof is a PCR product.

Please substitute the following claim 115 for currently pending claim 115:

115. (Once amended) A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least one promoter and at least a first recombination site;

(b) providing a second nucleic acid molecule comprising at least one antibiotic resistance gene or portion thereof and at least a second recombination site; and

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(c) forming a mixture between said first and second nucleic acid molecules and at least one recombination protein, under conditions sufficient to cause recombination between said first and second recombination sites, thereby producing a third nucleic acid molecule in which said promoter and said antibiotic resistance gene or portion thereof are operably linked.

Please substitute the following claim 133 for currently pending claim 133:

133. (Once amended) The method of claim 115, wherein said antibiotic resistance

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gene or portion thereof is located adjacent to said second recombination site.

Please substitute the following claim 141 for currently pending claim 141:

141. (Once amended) The method of claim 115, wherein said gene or portion thereof

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is a PCR product.

Please substitute the following claim 149 for currently pending claim 149:

149. (Once amended) The method of claim 115, further comprising introducing said nucleic acid molecule into a host cell and expressing said antibiotic resistance gene or portion thereof.

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Please substitute the following claim 151 for currently pending claim 151:

151. (Once amended) A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least one promoter and at least a first *lox*P site;

(b) providing a second nucleic acid molecule comprising at least one antibiotic resistance gene or portion thereof and at least a second *lox*P site; and

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(c) forming a mixture between said first and second nucleic acid molecules and at least one Cre recombination protein, under conditions sufficient to cause recombination between said first and second *lox*P sites, thereby producing a third nucleic acid molecule in which said promoter and said antibiotic resistance gene or portion thereof are operably linked.

Please substitute the following claim 155 for currently pending claim 155:

155. (Once amended) The method of claim 151, further comprising introducing said third nucleic acid molecule into a host cell and expressing said antibiotic resistance gene or

D11

D11 cont

portion thereof.

(b) Please insert the following new claims 158-225:

158. (New) The method of claim 35, wherein said first gene and said second gene are the same.

D12

159. (New) A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least one promoter located adjacent to at least a first recombination site;

(b) providing a second nucleic acid molecule comprising at least one gene or portion thereof located adjacent to at least a second recombination site; and

(c) forming a mixture *in vitro* between said first and second nucleic acid molecules and at least one recombination protein, under conditions sufficient to cause recombination *in vitro* between said first and second recombination sites, thereby producing a third nucleic acid molecule in which said at least one promoter and said at least one gene or portion thereof are operably linked.

160. (New) The method of claim 159, wherein said gene is an antibiotic

resistance gene.

161. (New) The method of claim 160, wherein said antibiotic resistance gene is selected from the group consisting of a chloramphenicol resistance gene, an ampicillin resistance gene, a methicillin resistance gene, a tetracycline resistance gene and a kanamycin resistance gene.

162. (New) The method of claim 160, wherein said antibiotic resistance gene is a chloramphenicol resistance gene.

D12 cont

163. (New) The method of claim 159, wherein said portion of said gene is a fragment of a structural gene.

164. (New) The method of claim 159, wherein said first and second recombination sites are selected from the group consisting of *lox* sites, *att* sites, and mutants thereof.

165. (New) The method of claim 159, wherein said first and second recombination sites are selected from the group consisting of *lox* sites and *att* sites.

166. (New) The method of claim 159, wherein said first and second recombination sites are *lox* sites.

167. (New) The method of claim 166, wherein said *lox* sites are *lox*P sites.

168. (New) The method of claim 159, wherein said first and second recombination sites are *att* sites.

169. (New) The method of claim 168, wherein said *att* sites are selected from the group consisting of *att*B sites, *att*P sites, *att*L sites and *att*R sites.

D12 Cont

170. (New) The method of claim 159, wherein said at least one recombination protein is selected from the group consisting of Cre, Int, IHF, Xis, FLP, γδ, Tn3 resolvase, Hin, Gin, Cin and combinations thereof.

171. (New) The method of claim 159, wherein said at least one recombination protein is Cre.

172. (New) The method of claim 159, wherein said at least one recombination protein is selected from the group consisting of Int, IHF and Xis.

173. (New) The method of claim 159, wherein said at least one recombination protein is Int.

174. (New) The method of claim 159, wherein said at least one recombination protein is IHF.

175. (New) The method of claim 159, wherein said at least one recombination protein is Xis.

176. (New) The method of claim 159, wherein said first nucleic acid molecule or said second nucleic acid molecule or said third nucleic acid molecule is a vector.

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177. (New) The method of claim 176, wherein said vector is an expression vector.

178. (New) The method of claim 159, wherein said first nucleic acid molecule or said second nucleic acid molecule is linear.

179. (New) The method of claim 159, further comprising expressing said gene or portion thereof that is operably linked to said promoter.

180. (New) The method of claim 159, further comprising contacting at least one host cell with said mixture, and selecting for a host cell comprising said third nucleic acid molecule.

181. (New) The method of claim 180, further comprising selecting against a host cell comprising said first or said second nucleic acid molecule.

182. (New) The method of claim 180, further comprising selecting against a host cell comprising said first and said second nucleic acid molecules.

183. (New) The method of claim 180, further comprising expressing said gene or portion thereof that is operably linked to said promoter in said selected host cell.

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184. (New) The method of claim 180, wherein said host cell is a prokaryotic cell.

185. (New) The method of claim 180, wherein said host cell is a bacterial cell.

186. (New) The method of claim 180, wherein said host cell is an *Escherichia coli* cell.

187. (New) A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least one promoter and at least a first recombination site;

(b) providing a second nucleic acid molecule comprising at least one antibiotic resistance gene or portion thereof and at least a second recombination site; and

(c) forming a mixture *in vitro* between said first and second nucleic acid

molecules and at least one recombination protein, under conditions sufficient to cause recombination *in vitro* between said first and second recombination sites, thereby producing a third nucleic acid molecule in which said promoter and said antibiotic resistance gene or portion thereof are operably linked.

188. (New) The method of claim 187, wherein said antibiotic resistance gene is selected from the group consisting of a chloramphenicol resistance gene, an ampicillin resistance gene, a methicillin resistance gene, a tetracycline resistance gene and a kanamycin resistance gene.

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189. (New) The method of claim 187, wherein said antibiotic resistance gene is a chloramphenicol resistance gene.

190. (New) The method of claim 187, wherein said first and second recombination sites are selected from the group consisting of *lox* sites, *att* sites, and mutants thereof.

191. (New) The method of claim 187, wherein said first and second recombination sites are selected from the group consisting of *lox* sites and *att* sites.

192. (New) The method of claim 187, wherein said first and second recombination sites are *lox* sites.

193. (New) The method of claim 192, wherein said *lox* sites are *lox*P sites.

194. (New) The method of claim 187, wherein said first and second recombination sites are *att* sites.

195. (New) The method of claim 194, wherein said *att* sites are selected from the group consisting of *att*B sites, *att*P sites, *att*L sites and *att*R sites.

196. (New) The method of claim 187, wherein said promoter is located adjacent to said first recombination site.

197. (New) The method of claim 187, wherein said antibiotic resistance gene or portion thereof is located adjacent to said second recombination site.

198. (New) The method of claim 187, wherein said at least one recombination protein is selected from the group consisting of Cre, Int, IHF, Xis, FLP, γδ, Tn3 resolvase, Hin, Gin, Cin and combinations thereof.

199. (New) The method of claim 187, wherein said at least one recombination protein is Cre.

200. (New) The method of claim 187, wherein said at least one recombination protein is selected from the group consisting of Int, IHF and Xis.

201. (New) The method of claim 187, wherein said first nucleic acid molecule or said second nucleic acid molecule or said third nucleic acid molecule is a vector.

202. (New) The method of claim 201, wherein said vector is an expression vector.

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203. (New) The method of claim 187, wherein said first nucleic acid molecule or said second nucleic acid molecule is linear.

204. (New) The method of claim 187, further comprising contacting at least one host cell with said mixture, and selecting for a host cell comprising said third nucleic acid molecule.

205. (New) The method of claim 204, further comprising selecting against a host cell comprising said first or said second nucleic acid molecule.

206. (New) The method of claim 204, further comprising selecting against a host cell comprising said first and said second nucleic acid molecule.

207. (New) The method of claim 204, wherein said host cell is a prokaryotic cell.

208. (New) The method of claim 204, wherein said host cell is a bacterial cell.

209. (New) The method of claim 204, wherein said host cell is an *Escherichia coli* cell.

210. (New) The method of claim 187, further comprising introducing said third nucleic acid molecule into a host cell.

211. (New) The method of claim 187, further comprising introducing said nucleic acid molecule into a host cell and expressing said antibiotic resistance gene or portion thereof.

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212. (New) The method of claim 211, wherein said host cell is an *Escherichia coli* cell.

213. (New) A method of producing a nucleic acid molecule comprising:

(a) providing a first nucleic acid molecule comprising at least one promoter and at least a first *lox*P site;

(b) providing a second nucleic acid molecule comprising at least one antibiotic resistance gene or portion thereof and at least a second *lox*P site; and

(c) forming a mixture *in vitro* between said first and second nucleic acid molecules and at least one Cre recombination protein, under conditions sufficient to cause recombination *in vitro* between said first and second *lox*P

sites, thereby producing a third nucleic acid molecule in which said promoter and said antibiotic resistance gene or portion thereof are operably linked.

214. (New) The method of claim 213, wherein said antibiotic resistance gene is selected from the group consisting of a chloramphenicol resistance gene, an ampicillin resistance gene, a methicillin resistance gene, a tetracycline resistance gene and a kanamycin resistance gene.

215. (New) The method of claim 213, wherein said antibiotic resistance gene is a chloramphenicol resistance gene.

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216. (New) The method of claim 213, further comprising introducing said third nucleic acid molecule into a host cell.

217. (New) The method of claim 213, further comprising introducing said third nucleic acid molecule into a host cell and expressing said antibiotic resistance gene or portion thereof.

218. (New) The method of claim 216, wherein said host cell is an *Escherichia coli* cell.

219. (New) The method of claim 216, wherein said host cell is an *Escherichia coli* cell.

220. (New) The method of claim 151, further comprising contacting at least one host cell with said mixture, and selecting for a host cell comprising said third nucleic acid molecule.

221. (New) The method of claim 220, further comprising selecting against a host cell comprising said first or said second nucleic acid molecule.

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222. (New) The method of claim 220, further comprising selecting against a host cell comprising said first and said second nucleic acid molecule.

223. (New) The method of claim 213, further comprising contacting at least one host cell with said mixture, and selecting for a host cell comprising said third nucleic acid molecule.

224. (New) The method of claim 223, further comprising selecting against a host cell comprising said first or said second nucleic acid molecule.

225. (New) The method of claim 223, further comprising selecting against a host cell comprising said first and said second nucleic acid molecule.